

$$\hat{y} = 2.57 + 0.0027x$$

$$H_0: \beta = 0$$

$$H_a: \beta < 0$$

$$t = \frac{b}{SE_b} = 0.665$$

$$P(t < 0.665 | df = 7) = 0.736$$

fail to reject H_0 ...

- Suff. evid. that slope of pop regr. line = 0.
- As weight increases, GPA doesn't change.

$$t = 0.665$$

$$\text{Est. for } \beta = b = 0.0027$$

$$df = 7$$

$$SE_b \Rightarrow t = \frac{b}{SE_b}$$

$$0.665 = \frac{0.0027}{SE_b}$$

$$SE_b = 0.004$$

$$p\text{-value} = 0.736$$

$$b \pm t^* SE_b$$

$$0.0027 \pm (2.365)(0.004)$$

$$(-0.00676, 0.01216)$$

We are 95% conf. that the slope of the pop. regl. line btw Wt. and GPA is btw -0.00676 and 0.01216 points/lb.

- $r = 0.2437$ - weak

- $r^2 = 0.0594$

5.94% of the change in GPA is due to the change in weight.